CHAPTER 4: REPRODUCTION

**Theme 2: Maintenance and Continuity of Life**

Content Standard : 4.1 Sexual and Asexual Reproduction

# What is reproduction?

Reproduction is the _____

_____

Sexual Asexual

# Reproduction

CHAPTER 4: REPRODUCTION

## Sexual Reproduction and Asexual Reproduction

| Sexual | Asexual |
| --- | --- |
| _____ reproductive cells. | _____ reproductive cells. |
| (Sperm + Egg fertilise one another to form a Zygote) | (The single organism makes a copy of itself and divides) |

Requires _____. Requires _____.
Occurs in
✓ Human
✓ Flowering plants
✓ Higher animals (mammal, bird, fish, reptile and amphibian)

Occurs in
✓ Plants (ginger, onion, potato)
✓ Simple organisms (Hydra, Amoeba, Paramecium)
The offspring are genetically _____ from the parents, but contain a random combination of parental genes
The offspring are genetically _____ to the parent.
Advantage :
♣ Produces _____ babies, increasing the survival rate of the population.
Disadvantage :
♣ Requires a lot of time and effort.
Advantage :
♣ Extremely _____.
Disadvantage :
♣ If the parent has genetic defects, all of its offspring will also be infected.
Sexual Reproductio
➢ _____ is a fusion between sperm and ovum. _____ is the first process involved that causes the formation of babies in the body of pregnant mothers.
Pg93
Fertilisation

Internal Fertilisation

External Fertilisation Vegetative reproduction ✓ root ✓ stem



Asexual Reproductio

Budding

Content Standard : 4.2 Human reproductive system

# CHAPTER 4: REPRODUCTION

## Physical Changes that Occur During Puberty

_____ is the early stage of the _____ of the reproductive system.

**Male Female**

✓ Boys reach puberty at approximately

_____ years old.

✓ Girls reach puberty at approximately

_____ years old.

Body

hair grows on the _____

➢ moustache and beard begin to grow

Voice

➢ vocal cord _____

➢ voice becomes _____

Body

➢ _____ grow

➢ hips become _____

➢ hair grows on the _____

Testes produce _____ and

_____.

Hair grows at pubic region.

Penis and scrotum _____.

Reproductive Organs

❖ Ovaries produce _____ and

_____.

❖ Hair grows at pubic region.

❖ _____ cycle begins.

Reproductive Organs

CHAPTER 4: REPRODUCTION

Content Standard : 4.3 Menstrual Cycle

Menstruation phase

Premenstrual phase

Repair

phase

Fertile phase



CHAPTER 4: REPRODUCTION

Content Standard : 4.4 Fertilisation and Pregnancy

The process of fertilization and embryo implantation

_____ – a process where the implanted embryo will grow and become a foetus that resembles a human.

The foetus will be born after approximately _____.

# CHAPTER 4: REPRODUCTION

## The Importance and Functions of the Placenta and the Umbilical Cord

# CHAPTER 4: REPRODUCTION

## Content Standard : 4.5 Factors Affecting the Development of a Foetus and Baby

- ✓ A pregnant woman must have a healthy and _____ and take good care of her health to deliver a healthy baby.
- ✓ The intake of nutrients by a pregnant woman must be balanced and contain more carbohydrate, _____, _____, folic acid, _____, phosphorus, _____, _____ and fibre. Pg112
- ✓ Pregnant women must not _____, consume _____ and _____.

## Content Standard : 4.6 Infertility and Contraception

_____ is the inability to produce _____.

Factors of sterility in

Factors of sterility in

CHAPTER 4: REPRODUCTION

Methods to Overcome Sterility

1. _____ is suitable for individuals who have imbalanced hormone.

2. _____ is done on men who have blockage in their _____ or women who have

blockage in their _____ tube.

3. _____ is done on women who have blockage in their Fallopian tube. Through this method, the ovum is taken out to be fertilized with the sperm outside the body in a glass dish. the embryo formed is then put inside the uterus.

Methods of Contraception

1. Contraceptive pills
2. Implants
3. Use of _____
4. Intrauterine Contraceptive Device, IUCD
5. _____ (men)
6. _____ (women)

# CHAPTER 4: REPRODUCTION

Content Standard : 4.7 Plant Reproduction

Structure of the Flowers

| Parts of the flower | Function |
| --- | --- |
| Petal | |
| Sepal | |
| Filament | |
| Anther | |
| Pollen | |
| Stigma | |
| Style | |
| Ovary | |
| Ovule | |

There are two types of flowers :

**UNISEXUAL FLOWER**



**BISEXUAL FLOWER**

CHAPTER 4: REPRODUCTION

**Pollination** is the _____ of transferring matured pollen grains from anther to stigma.

**A. Self-pollination**

♣ The pollen from the anther of a flower is transferred to the stigma of the _____ or the stigma of a _____ on the same plant.

♣ Pollination occurs and a _____ is able to form.

♣ This transfer can happen when the pollen grains literally spill onto the stigma, or the transfer can occur with the aid of a pollinator, like an insect, wind, or water.

♣ The flowers of plants that use _____ to reproduce are generally much smaller.

It occurs within the _____ flower It occurs between _____ flowers of the same plant

transferred to the stigma of the same flower.

ıe pollen from the anther of a flower is transferred to

the stigma of a different flower in the same plant.

The pollen from the anther of a flower is



**B. Cross-pollination**

♣ The pollen from the anther of a flower on one plant is transferred to the stigma of the flower

on _____ plant of the same species.

♣ Pollination occurs and a _____ is able to form.

♣ This transfer happens when the pollen is moved by an insect, by water, or by the wind. This type

of pollination requires that there are two plants of the _____ variety in the area.

♣ The flowers of plants that use cross-pollination are generally _____.



# Pollinating Agents

Abiotic Factor Biotic Factor

Wind

Water

The Advantages of Cross-Pollination

Bird

Insect

# CHAPTER 4: REPRODUCTION

## Fertilisation Process

# CHAPTER 4: REPRODUCTION

Seed Root Vascular Leaf Flower